

### ABSTRACT

The gas oil fraction hydrotreatment process of the invention is characterized by using a gas oil fraction with a sulfur content of 0.8-2 % by mass and a total aromatic content of 20-35 % by volume as the feed oil and subjecting the feed oil to hydrotreatment in the presence of a hydrogenation catalyst comprising at least one metal from among Group 6A metals and at least one metal from among Group 8 metals as active metals, and under reaction conditions with a reaction temperature of 330-390°C, a hydrogen partial pressure of 12-20 MPa and a liquid hourly space velocity of 0.1-1 h<sup>-1</sup>, to obtain an ultralow sulfur and low aromatic gas oil fraction having a sulfur content of not greater than 1 ppm by mass and a total aromatic content of not greater than 1 % by volume. This hydrotreatment process allows production of a "zero sulfur" and "zero aromatic" gas oil fraction in an efficient and reliable manner without provision of special operating conditions or equipment investment.